FUTURE FISHERIES IMPROVEMENT PROGRAM
GRANT APPLICATION
(please fill in the highlighted areas)

I. APPLICANT INFORMATION

A. Applicant Name: Clark Fork Coalition

B. Mailing Address: 140 S. 4th St. W. #1

C. City: Missoula State: MT Zip: 59807

Telephone: (406) 542-0539 x210

D. Contact Person: Andy Fischer (Clark Fork Coalition)

Address if different from Applicant:

City: State: Zip:

Telephone: (406) 542-0539 x210

E. Landowner and/or Lessee Name (if other than Applicant): Ward Irrigation District

Mailing Address: 220 Camas Creek Loop

City: Hamilton State: MT Zip: 59840

Telephone: (406) 323-3224

II. PROJECT INFORMATION*

A. Project Name: Lost Horse Creek Fish Passage and Streamflow Enhancement

River, stream, or lake: Lost Horse Creek

Location: Township 4 N Range 21W Section 11

County: Ravalli

B. Purpose of Project:

This project will remove a fish barrier and provide instream flow, reconnecting the creek to the Bitterroot River during the summer and fall. Ward Irrigation District has agreed to leave water in-stream, and upgrade its diversion infrastructure. This project will increase the flow of cool water, reduce sedimentation, lower temperatures, improve water quality, and remove a fish passage barrier in this important native trout stream.

C. Brief Project Description:

Ward Irrigation District is comprised of 99 members who irrigate 963 acres near Darby, Montana. The District relies on irrigation water from both the Bitterroot River and Lost Horse Creek. In order to convey water from its irrigation canal on the Bitterroot River, the District must create an earthen dam on Lost Horse Creek. This practice impedes all flow in Lost Horse Creek, and prevents it from joining the Bitterroot River. In addition, this dewatering impairs the creek and compounds other water quality problems, including high temperature. The Ward Irrigation District is interested in changing its irrigation practices to improve stream health, as well as its water management. The District plans to install a siphon to transport their Bitterroot River water underneath Lost Horse Creek in a pipe. As part of this project, the District is willing to leave up to 10 cfs flowing below their diversion on Lost Horse Creek, ensuring it is connected to the Bitterroot River year-round (refer to the attached letter of intent). Lost Horse Creek has documented populations of bull trout, which are listed as a threatened species under the ESA. The primary cause of impairment to this creek listed in the Bitterroot TMDL Plan is low flow alteration, which impacts recreational uses of the creek and also impacts the Bitterroot River.

The Ward Irrigation District secured a project development grant through the DNRC in 2011 to complete initial designs for this project. The Clark Fork Coalition has held several meetings with members of the District to discuss potential instream flow agreements. An initial commitment was reached through a letter of intent, which states that the District will provide 10 cfs below their diversion if grant funds can be secured to build the siphon. Once grant commitments are secured, the Coalition and District plan to enter into a formal long-term water right diversion reduction agreement. This will require meetings and outreach with the District members to secure their support of the project. In addition, the Coalition will monitor flows in Lost Horse Creek 2013-2014 before and after the siphon is constructed to better delineate the amount of instream flow that will accrue from the project. The project is scheduled for construction during the winter of 2013/2014.

D. Length of stream or size of lake that will be treated: 2 miles

E. Project Budget:

Grant Request (Dollars): **$ 100,000**

Contribution by Applicant (Dollars): $ _____ In-kind $ 4,000
(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): $ 214,565 In-kind $ _____
(attach verification - See page 2 budget template)

Total Project Cost: **$ 318,565**

F. Attach itemized (line item) budget – see template

G. Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete supplemental questionnaire (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

H. Attach land management and maintenance plans that will ensure protection of the reclaimed area.

III. PROJECT BENEFITS*

A. What species of fish will benefit from this project?:

The project will benefit westslope cutthroat trout, bull trout, brook, rainbow and brown trout. Based on entrainment data, westslope cutthroat and brook trout are the primary species that would benefit. Bull trout are considered rare in this section of Lost Horse and the nearby Bitterroot, but are more common in the upper creek (RM 13).

B. How will the project protect or enhance wild fish habitat?:

Removing this seasonal passage barrier in the lower creek (from August-October) will allow for fluvial populations of adult bull trout in the Bitterroot River to access habitat in Lost Horse Creek. The project will also provide enhanced fish passage through the removal of a barrier and providing instream flow. In addition, this project will significantly reduce entrainment risks for juvenile and adult fish species at the Ward Diversion, especially for westslope cutthroat trout. According to a 2007 master's thesis, the Ward Canal is the largest source of entrainment in Lost Horse Creek and annually captures approximately 7,000 fish (Bahn, 2007). By changing the District's use of this irrigation source during the summer months, this source of entrainment will be largely eliminated.

C. Will the project improve fish populations and/or fishing? To what extent?:

Yes, the project expects to improve fish populations and angling opportunity as a result of this project. By removing this passage barrier, reducing the entrainment risk and providing instream flow below the diversion, we expect that fish populations within the lower reach of Lost Horse Creek (2 miles) and the nearby Bitterroot River will improve over time. Fishing below the Ward Diversion on Lost Horse Creek will be enhanced due to the presence of streamflow from mid-July through October.

The extent to which fish populations will improve is difficult to predict, although if the 7,000 fish annually entrained is reduced and instream flow in the amount of 10 cfs is provided to the confluence with the Bitterroot River, we expect to see measurable changes over time in fish numbers as a result of the project. While the amount of instream flow below the diversion may be less than 10 cfs at times due to upstream senior water right withdrawals, our 2012 flow monitoring results did not indicate that the creek would have ever been dry (if the project were in place). The Ward Irrigation District has signed an initial letter of intent to enter into a formal minimum flow agreement to pass any flows below 10 cfs past their diversion to the Bitterroot River. Our lowest flow measurement conducted in 2012 on Lost Horse Creek was approximately 2 cfs.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

Yes, currently there is no flow below the Ward ditch on Lost Horse Creek located approximately 0.5 miles from the confluence with the Bitterroot River from mid to late July through the end of October. The dominant fish species that inhabits this lower section of creek is westslope cutthroat and brook trout. Anglers can gain public access for fishing from either the Highway 93 bridge crossing or the Bitterroot River. Providing instream flow and reducing fish entrainment will increase available fishing habitat and native fish populations within existing habitat.

E. If the project requires maintenance, what is your time commitment to this project?:

The District will be required to operate and maintain the facility for its useful life. The new siphon is expected to last from 50-100 years. When an engineer determines that the siphon has exceeded its intended life and no longer performs the needed functions, the District will no longer be obligated to provide flows below their diversion.

The instream flow benefit is anticipated to accrue for the useful life of the siphon project (50-100 years). The Clark Fork Coalition proposes to monitor instream flows for the first 10 years of the project to set up the necessary flow monitoring triggers and protocols. At this point, the granting agency could choose to have either Ward Irrigation District monitor flow or another third party. In order to effectively monitor instream flow, the Coalition will need to purchase and install staff gages above and below the Ward diversion and purchase an automated flow gage. The automated flow gage will also record stream temperature. The Clark Fork Coalition will use our Marsh McBirney flow meter to manually measure streamflows at least 4 times per year for the purpose of developing an annual rating curve for the staff and automated flow gages. The Coalition will work closely with the ditch rider for the District to ensure the necessary flows are provided to the creek. During the fall of each year, the Coalition will download, process the automated flow data (develop rating curves/graphs) and summarize it in a short report (which is will be made available to FWP). We expect that 10 years of active flow monitoring will be enough time to set up the necessary monitoring and flow management protocols to ensure the water quality benefits are being realized and measured correctly. After 10 years, it would be the responsibility of the District and or other interested agencies to oversee management of the instream flow.

F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?:

The primary cause of habitat degradation is a result of the over appropriation of surface water for irrigation use in Lost Horse Creek, which causes chronic dewatering in the lower 4 miles of creek and limits available fish habitat and movement. In addition, the earth dam on Lost Horse Creek creates a passage barrier and limits fish movement between creek and the river. The project will address this cause of habitat degradation by removing an earth dam that annually captures all flow in the lower creek with a new irrigation structure called a siphon. This will result in an agreement between the District and the Coalition to reduce their reliance on irrigation water from Lost Horse Creek and provide instream flows below their diversion in the amount of 10 cfs.

The project addresses the primary water quality limiting factor identified in the Bitterroot TMDL of low flow alterations and is supported by the following restoration plans:
-Northwest Power and Conservation Council 2009 Bitterroot Subbasin Plan, Focus of re-establishing fluvial populations through restoration
-MT DEQ 303d list of impaired water bodies, Cause: low flow alterations, Source: agriculture
-MT FWP 2006, Identified as "chronically dewatered" from RM 0.0-4.0
-USF&WS Clark Fork River Recovery Plan: Recommends improving instream flows and passage

G. What public benefits will be realized from this project?:

Public benefits from this project will include: improved aquatic habitat and water quality, increased fish numbers, enhanced fishing opportunities and an improved tourism and agricultural economy. The project aims to improve the management of water resources and reduce fish mortality for the benefit of both the irrigation district and the public.

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

No, we do not expect any interference with water or property rights of adjacent landowners. The District holds and easement along their ditch, which accommodates for construction activities (such as the installation of a siphon). While there are other water right holders on Lost Horse Creek, we do not expect that they will be impacted as a result of Ward allowing flow to pass below their diversion.

I. Will the project result in the development of commercial recreational use on the site?: (explain):

No, there is no planned development of commercial recreational use at the site of the project.

J. Is this project associated with the reclamation of past mining activity?:

No.

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature: Karen Knudson Date: Nov. 28, 2012

Sponsor (if applicable):

***Highlighted boxes will automatically expand.**

Mail To: **Montana Fish, Wildlife & Parks**
Habitat Protection Bureau
PO Box 200701
Helena, MT 59620-0701

Incomplete or late applications will be returned to applicant.

Applications may be rejected if this form is modified.

FUTURE FISHERIES IMPROVEMENT PROGRAM

SUPPLEMENTAL INFORMATION SHEET FOR WATER LEASING OR WATER SALVAGE PROJECTS

The following additional information is requested to supplement the Future Fisheries Application for projects associated with water leasing or water salvage. Please complete this supplemental form and submit it as part of the Future Fisheries Grant Application.

1. **Please complete the following table describing the water right(s) associated with the proposed project.** Note: Much of this information can be obtained either from your own water rights records or online at http://www.dnrc.state.mt.us/wrd/home.htm (choose "water rights" and then select an index to look up applicable claims)

RIGHT NUMBER; WATER SOURCE	POINT OF DIVERSION	QUANTIFIED FLOW (CFS)/ VOLUME (AF)/ IRRIGATED ACRES	PRIORITY DATE; PERIOD OF USE	RELATIVE PRIORITY ON WATER SOURCE	PURPOSE OF WATER RIGHT	OTHER CLAIMED ON THE STREAM SENIOR TO YOUR LISTED CLAIMS
Example: 76H 5830 00; Lost Horse Creek	SWNESW Sec. 11; T4N; R21W	16.25 cfs / 792 irrigated acres	9/12/1905; April 1st through Nov. 4th	28th priority of 40 claims	Irrigation	36.86 cfs senior to this right

2. **In the last 10 years, has your full water right amount regularly been available at your point of diversion throughout your period of use?**

   No, the full flow rate is not satisfied typically after mid to late July from Lost Horse Creek. Based on monitoring data from 2012, flows directly above the Ward Irrigation District diversion were less than 16.25 cfs from 8/4-10/15. Flows decreased through August from 21 cfs to 3 cfs and in September decreased from 3 cfs to 2 cfs. Although there is limited data to support the available flows below the Ward diversion, 2012 was an especially dry year. We don't expect that inflows would ever drop to 0 (except during an extreme drought), although during dry years such as 2012 available flow at the Ward diversion is likely less than 10 cfs, but more than 2 cfs during the critical summer months. It also appears that the Lost Horse Creek is a gaining reach below the most senior diversions, which means that the creek naturally picks up return flow even when demands are high.

   Have you ever made "a call" on junior water users to obtain the water you needed (through a water commissioner or otherwise)?

   Yes, the District regularly calls on Bitterroot Irrigation District (BRID) in early to mid-July to cease their use of high water as creek flows drop. BRID has verbally indicated that they will continue to honor this practice and are open to considering a memorandum of understanding that describes these historical practices.

3. **Please describe or include a summary of any measurements of the amount of water you have regularly diverted and how much typically flows by your diversion during different time periods.**

2012 Flow Measurements

Date:	Lost Horse at HWY 93 (CFS):	Ward Canal (CFS):
7/6/12	233.07	13.84
8/7/12	14.05	
8/22/12	7.11	
9/6/12	2.48	
10/18/12	17.26	

Based on our data presented above, we expect that in typical water years flows will decrease to 10 cfs at the beginning of August and continue to decrease to 3 cfs (or slightly less depending on the water year) by the end of September. This will be a significant improvement over the current flows of 0 cfs below the Ward Diversion from mid-July through October.

4. **Has your local FWP fish biologist confirmed that your leasing/salvage project addresses a stream flow problem that significantly limits the fishery?**

Yes, please refer to the attached letter of support.

5. **How much actual water (often different than just the remainder of your water rights) will be added to the stream through completion of your project?**

2 to 10 cfs.

What length of stream will benefit from this additional flow? **(Note: Under certain circumstances, senior water can be protected legally from diversion by downstream junior users.)**

2 miles (please fill in or describe) Although the Ward Diversion is located only .5 miles from the Bitterroot River, we expect that there will be upstream benefits to the next major diversion for fish passage and available habitat. The District's water right will not be going through a formal change process through the DNRC. Instead, flows will be protected below the diversion through a private minimum flow agreement.

6. **Is there a water commissioner on your stream? No**

Are you willing to actively assist in monitoring and/or protecting the conserved water instream? Yes, we are interested in actively monitoring flows and coordinating with the District to manage their headgate for a period of 10 years.

Attachment F:

Itemized Budget

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS
(Revised 11/28/2012)

WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS			
					FUTURE FISHERIES REQUEST	IN-KIND SERVICES	IN-KIND CASH	TOTAL
Personnel								
Survey				$ -				$ -
Design								$ -
Engineering		Final Design and construction supervision	$46,600.00	$ 46,600.00	4,500.00		42,100.00	$ 46,600.00
Permitting	1	Env. Comliance	$5,200.00	$ 5,200.00	-		5,200.00	$ 5,200.00
Oversight	1	Legal Agreements, project coordination and grant administration	$30,000.00	$ 30,000.00	3,000.00	4,000.00	23,000.00	$ 30,000.00
Labor	10	years monitoring	$1,000.00	$ 10,000.00	3,000.00		7,000.00	$ 10,000.00
Travel								
Mileage	3000		$0.56	$ 1,665.00	500.00		1,165.00	$ 1,665.00
Per diem				$ -				$ -
Construction Materials								
Concrete Inlet Structure	6	CY	$1,000.00	$ 6,000.00	6,000.00			$ 6,000.00
Trash Rack	1	LS	$5,000.00	$ 5,000.00	5,000.00			$ 5,000.00
HDPE Pipe- 42 inch (DR 32.5)	210	LF	$200.00	$ 42,000.00	42,000.00			$ 42,000.00
HDPE Long Radius Bend- 42 inch	1	EA	$12,000.00	$ 12,000.00	12,000.00			$ 12,000.00
HDPE Tee	1	EA	$9,500.00	$ 9,500.00	9,500.00			$ 9,500.00
Bore and Jack- 48 inch Steel	50	LF	$1,500.00	$ 75,000.00	14,500.00		60,500.00	$ 75,000.00
Tie Downs	6	EA	$900.00	$ 5,400.00			5,400.00	$ 5,400.00
6" Gate Valve	1	EA	$1,200.00	$ 1,200.00			1,200.00	$ 1,200.00
HDPE Pipe- 6 inch (DR 32.5)	100	LF	$40.00	$ 4,000.00			4,000.00	$ 4,000.00
Concrete Outlet Structure	6	CY	$1,000.00	$ 6,000.00			6,000.00	$ 6,000.00
Demolition	1	LS	$8,000.00	$ 8,000.00			8,000.00	$ 8,000.00
Excavation/Embankment	300	CY	$30.00	$ 9,000.00			9,000.00	$ 9,000.00
Dewatering/Bypass Pumping	1	LS	$20,000.00	$ 20,000.00			20,000.00	$ 20,000.00
Air Testing	1	LS	$4,000.00	$ 4,000.00			4,000.00	$ 4,000.00

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS
(Revised 11/28/2012)

Equipment									
				$ -				$	-
Mobilization									
Mobilization	1	LS	$8,000.00	$ 8,000.00			8,000.00	$	8,000.00
Taxes Bonds and Insurance	1	LS	$5,000.00	$ 5,000.00			5,000.00	$	5,000.00
General Requirements	1	LS	$5,000.00	$ 5,000.00			5,000.00	$	5,000.00
			TOTALS	$ 318,565.00	$ 100,000.00	$ 4,000.00	$ 214,565.00	$	318,565.00

*Units = feet, hours, inches, lump sum, etc.

MATCHING CONTRIBUTIONS

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL
DEQ 319 Grant Program (Secured)	$ -	$ 106,000.00	$ 106,000.00
DNRC RRGL Grant (Pending, but ranked highly)	$ -	$ 100,000.00	$ 100,000.00
Western Native Trout Initiative Grant (Pending)	$ -	$ 10,000.00	$ 10,000.00
Clark Fork Coalition (secured)	$ 4,000.00	$ -	$ 4,000.00
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -

MORRISON MAIERLE, INC.
3011 Palmer Street
Missoula, Montana 59808
Ph: (406) 542-8880
Fax: (406)-542-4801

ENGINEER'S OPINION
OF PROBABLE COST

Date: 2/15/2012
Project #: 4761.001
Project Name: Ward Irrigation District PER
Engineer: M. Barnes, M. Skorpik

LOST HORSE CREEK/WARD DITCH SIPHON

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Cost
101	Mob/Demob	1	LS	$5,500	$5,500
102	Concrete Inlet Structure	6	CY	$1,000	$6,000
103	HDPE Pipe - 42 inch (DR 32.5)	210	LF	$200	$42,000
104	HDPE Long Radius Bend - 42 inch	1	EA	$12,000	$12,000
105	HDPE Tee - 42 inch	1	EA	$9,500	$9,500
106	Bore and Jack - 48 inch (steel)	50	LF	$1,500	$75,000
107	Tie-downs	6	EA	$900	$5,400
108	6" Gate Valve	1	EA	$1,200	$1,200
109	HDPE Pipe - 6 inch (DR 32.5)	100	LF	$40	$4,000
110	Concrete Outlet Structure	6	CY	$1,000	$6,000
111	Demolition	1	LS	$8,000	$8,000
112	Excavation/Embankment	300	CY	$30	$9,000
113	Dewatering/Bypass Pumping	1	LS	$20,000	$20,000
114	Air Testing	1	LS	$4,000	$4,000

	CONSTRUCTION SUB-TOTAL		$207,600
	CONTINGENCY	25%	$51,900
	CONSTRUCTION TOTAL		**$259,500**
	GRANT ADMINISTRATION	1%	$2,600
	ENGINEERING DESIGN	10%	$26,000
	PERMITTING	2%	$5,200
	BIDDING	1%	$2,600
	CONSTRUCTION ADMINISTRATION	9%	$23,400
	PROJECT TOTAL		**$319,300**

* This draft estimate is for planning and infromational use only and is not intended for bidding or construction.

Attachment G:

Map

Photos

District Letter of Intent

Letters of Support

Project Plans


US HIGHWAY 93
BITTERROOT RIVER
N
WARD CANAL
MONTANA RAIL LINK
INTAKE AND
FISH SCREEN
LOST HORSE CREEK
LOST HORSE CREEK
SIPHON
LOST HORSE CREEK
MONTANA RAIL LINK
WARD CANAL

Lost Horse Creek Pre-Project Photos

Photo: Upstream of the Diversion

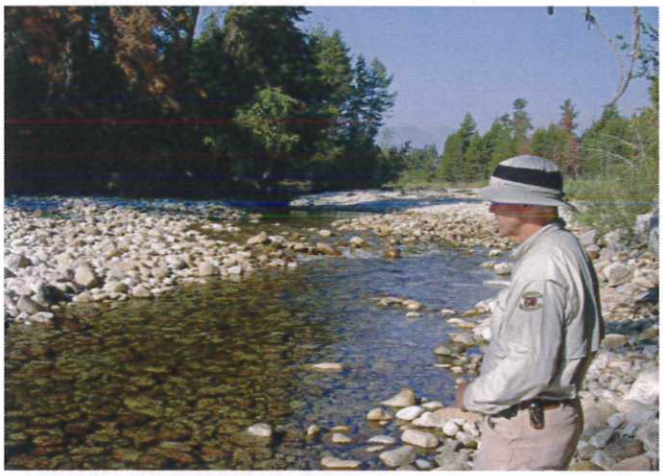


Photo: Dam across Creek

Photo: Downstream of the Diversion looking towards the Bitterroot River (entirely dewatered)

July 16, 2012

Clark Fork Coalition
PO Box 7593
Missoula, MT 59807

Ward Irrigation District
220 Camas Creek Loop
Hamilton, MT 59840

LETTER OF INTENT

Lost Horse Creek Siphon Project and Diversion Reduction

This letter of intent is executed by Clark Fork Coalition (the "Coalition") and Ward Irrigation District ("the District") (collectively referred to herein as the "Parties"). The Parties are working together to fund and implement an irrigation efficiency project. It is the intent of the Parties to execute this letter to memorialize their intention to jointly pursue the Project (as defined below). In furtherance of the Project, the Parties intend to conduct the following activities:

(1) Grant Funding. Proceed with jointly applying for grant funds to pay for 100% of the up-front capital investment in a siphon underneath Lost Horse Creek (the "Project"). The purpose of the Project is to eliminate the need for the District to dam Lost Horse Creek for conveying their Bitterroot River irrigation water into their canal system. The project will also allow Ward to reduce their diversion of Lost Horse Creek during times when flows are 10 cubic feet per second or less. The parties intend to have the Clark Fork Coalition prepare and submit grant applications to pay for this system improvement.

(2) Diversion Reduction Agreement. If grant funds are secured for the Project and the Project proves to be technically feasible, the Parties will enter into a superseding diversion reduction agreement to dedicate the irrigation water savings from the Project to instream flow in Lost Horse Creek that includes the general elements described in this Letter of Intent and any additional elements negotiated between the Parties. As part of this superseding agreement, the District will agree to reduce their diversion from Lost Horse Creek in order to provide a minimum flow of 10 cubic feet per second in the creek below their diversion. This diversion reduction agreement will not be a formal change or lease of the water rights through the Montana Department of Natural Resources and Conservation (DNRC), but instead a private agreement between the District and the Coalition (or others) to maintain a minimum flow. This agreement will be in place for the useful life of the siphon project. In the event that the siphon fails or during other emergency circumstances, the District would be able to resume their full use of Lost Horse Creek.

(4) Cooperation with the Clark Fork Coalition. Coordinate and provide access to representatives from the Coalition for the purposes of applying for grant funds, conducting field visits to document and measure water use, drafting agreements and monitoring instream flow.

(5) Timeline. The activities in paragraphs 1 through 4 above are anticipated to occur according to the following timeline:

Activity:	Summer – Fall 2012	Winter 2013	Spring 2013	Summer 2013	Fall 2013-Winter 2014
Funding:	Apply for any addl. grants	Receive Grants	Enter into formal grant agreement		Close out grant(s)
Siphon Construction:		Proceed to final design	Solicit bids and select contractor	Purchase materials	Construct Siphon
Diversion Reduction Agreement:	Sign Letter of Intent	Draft Agreement	Sign Agreement		
Monitoring:	Pre-Project Flow Monitoring			Pre-Project Flow Monitoring	Flow Monitoring/ Reporting

The Parties understand that the timeline above is a best estimate of the process. The main variable in this timeline is the approval of grant funds.

(6) Termination. The Parties may elect to terminate their participation under this Letter of Intent in writing if unforeseen complications arise, such as unfavorable water rights interpretations by DNRC or the siphon becomes technically infeasible.

[Signatures]

Karen Knudsen Date 7/23/12
Karen Knudsen, Executive Director
Clark Fork Coalition
140 S 4th Street West, Unit 1
PO Box 7593
Missoula, MT 59807

Ward Irrigation District Board of Directors (on behalf of the water users)
220 Camas Creek Loop
Hamilton, MT 59840

CODY LEE — Cody Lee Date 7/17/2012
Board Member Name (Printed) (Signature)

RONALD PORTER — Ronald M Porter Date 7/17/12
Board Member Name (Printed) (Signature)

DANIEL DUNAGAN — Daniel Dunagan Date 7-17-2012
Board Member Name (Printed) (Signature)

Montana Fish, Wildlife & Parks

11/28/12

Mark Lere
Montana Fish, Wildlife and Parks
1420 E. 6th Ave.
Helena, MT 59620

Dear Mark:

I understand that you will be receiving a Future Fisheries Improvement Grant Application from the Clark Fork Coalition entitled, "The Lost Horse Creek Fish Passage and Streamflow Enhancement Project."

I have visited the site several times and I support the project as proposed. The construction of a siphon in the Ward Ditch under Lost Horse Creek will eliminate the need for a cross channel dike that is constructed each year. For the dike to function properly and carry Bitterroot River water across Lost Horse Creek, it completely shuts off streamflow in the creek, except for a small amount of leakage. The dike is constructed during mid-summer.

In addition to eliminating the dike, the Clark Fork Coalition has secured an agreement with the irrigators to leave up to 10 cfs. in Lost Horse Creek when it is available. This means that more water will reach the Bitterroot River during midsummer. During dry years, less than 10 cfs. will be flowing into the River by late summer, but overall more water will reach the river in all years.

We know that Lost Horse Creek, upstream of the Ward Ditch, is used for spawning by fluvial westslope cutthroat trout. The data from Leslie Bahn's M.S. thesis indicates that a majority of the fish entrained in the Ward Ditch are brook trout. However, a significant number of westslope cutthroat trout are also entrained in this ditch. Therefore, I expect this project to allow more juvenile westslope cutthroat trout to enter the Bitterroot River.

The Bitterroot River suffers from dewatering of many of the tributaries during midsummer. This project is a step in the right direction towards improving this situation.

Sincerely,

Chris Clancy

Chris Clancy
Fisheries Biologist

BITTER ROOT WATER FORUM

PO Box 1247
Hamilton, MT 59840

(406) 375-2272
brwaterforum@
bitterroot.net

www.brwaterforum.org

May 10, 2012

Ward Irrigation District
220 Camas Creek Loop
Hamilton, MT 59840

To Whom It May Concern.

The Bitter Root Water Forum (BRWF) is a community driven non-profit organization dedicated to supporting the traditions of agriculture, community and recreation by protecting, enhancing and restoring the Bitterroot Watershed through on the ground restoration projects and watershed education. We are contacting you in support of the proposed Ward Ditch/Lost Horse Creek siphon project.

The existing structures are likely fish barriers that potentially divert fish from Lost Horse Creek into the Ward Ditch as well as de-water the creek during irrigation season. BRWF supports the proposed project as a siphon diverting water under the creek will begin to address existing fish barriers in Lost Horse Creek. BRWF will further support the proposed project if it goes beyond siphon installation and commits to a solution that will leave more water instream in Lost Horse Creek during the traditionally low flows that affect on the creek during irrigation season.

Please do not hesitate to call me with any questions.

Sincerely,

Heather Mullee
Executive Director

April 11th, 2012

Trout Unlimited
111 N. Higgins Ste.500
Missoula, MT 59802

Ward Irrigation District
220 Camas Creek Loop
Hamilton, MT 59840

Dear Board Members,

I am writing in support of the Ward Ditch/Lost Horse Creek Crossing project. This project addresses an irrigation conveyance practice that is outdated and inefficient. The current practice creates a barrier to fish passage and de-waters lower Lost Horse Creek during a time that is critical for fish migration.

Recent data shows that rare populations of Bull Trout have been identified in the Ward Ditch and Lost Horse Creek during 2005 and 2006. Lost Horse Creek is considered critical habitat for Bull Trout by the US Fish and Wildlife Service indicating that a few changes to the current irrigation practices will immediately improve conditions for Bull, Westslope Cutthroat Trout and other wild fish species requiring spawning habitat during the irrigation season.

Trout Unlimited will be in further support of this project when the Ward Irrigation District proposes a solution that leaves the required cfs for fish passage in Lost Horse Creek during the low flows of the irrigation season. The proposed project allows Ward Irrigation ditch to convey most of its water from the Bitterroot rather than both Lost Horse Creek and the Bitterroot. This is the preferred solution from Trout Unlimited's perspective.

I strongly recommend granting funds for these projects for several reasons: 1) this site is recognized as high priority for restoration, 2) the technical people involved in the work are experience and capable, and 3) project partners have demonstrated their commitment in following through with meaningful work on the ground.
Feel free to call me with any questions at (406) 541-8614.

Sincerely,

Heather Whiteley

Heather Whiteley
Project Manager
Trout Unlimited

MAY 11 2012

To: Department of Natural Resources and Conservation

Helena, Montana

From: Al Pernichele

634 Quast Lane

Corvallis, Montana

Subject: Ward Ditch Siphon

May 8, 2012

To Whom It May Concern:

As water commissioner for the Bitterroot River, I strongly recommend approval of the request for funds to install a siphon to prevent the Ward Ditch from mingling with water in Lost Horse Creek. This will greatly improve our ability to manage water being diverted from the Bitterroot River. It presently is not possible to measure the volume of water being diverted from the river from that diverted from Lost Horse Creek. As a result, it is not possible to ensure that water rights from these two sources are being administered in accordance with provisions of these rights. The only reliable measuring device in the ditch is located downstream from Lost Horse Creek.

The siphon will also greatly reduce entrainment of Westslope Cutthroat Trout and possibly Bull Trout in the Ward Ditch. Studies supported by Fish Wildlife and Parks indicate substantial losses from Lost Horse Creek and the Bitterroot River. The proposed siphon will eliminate entrainment of fish from Lost Horse. Plans to install a fish screen to prevent entrainment of fish from the river will eliminate losses from this source. Ward Ditch management must be commended for taking the initiative in eliminating loss of fish in their irrigation system.

Al Pernichele

Water Commissioner

Bitterroot River

Daniel Dunagan
125 Little Britches Drive
Hamilton, MT 59840

May 5, 2012

TO WHOM IT MAY CONCERN:

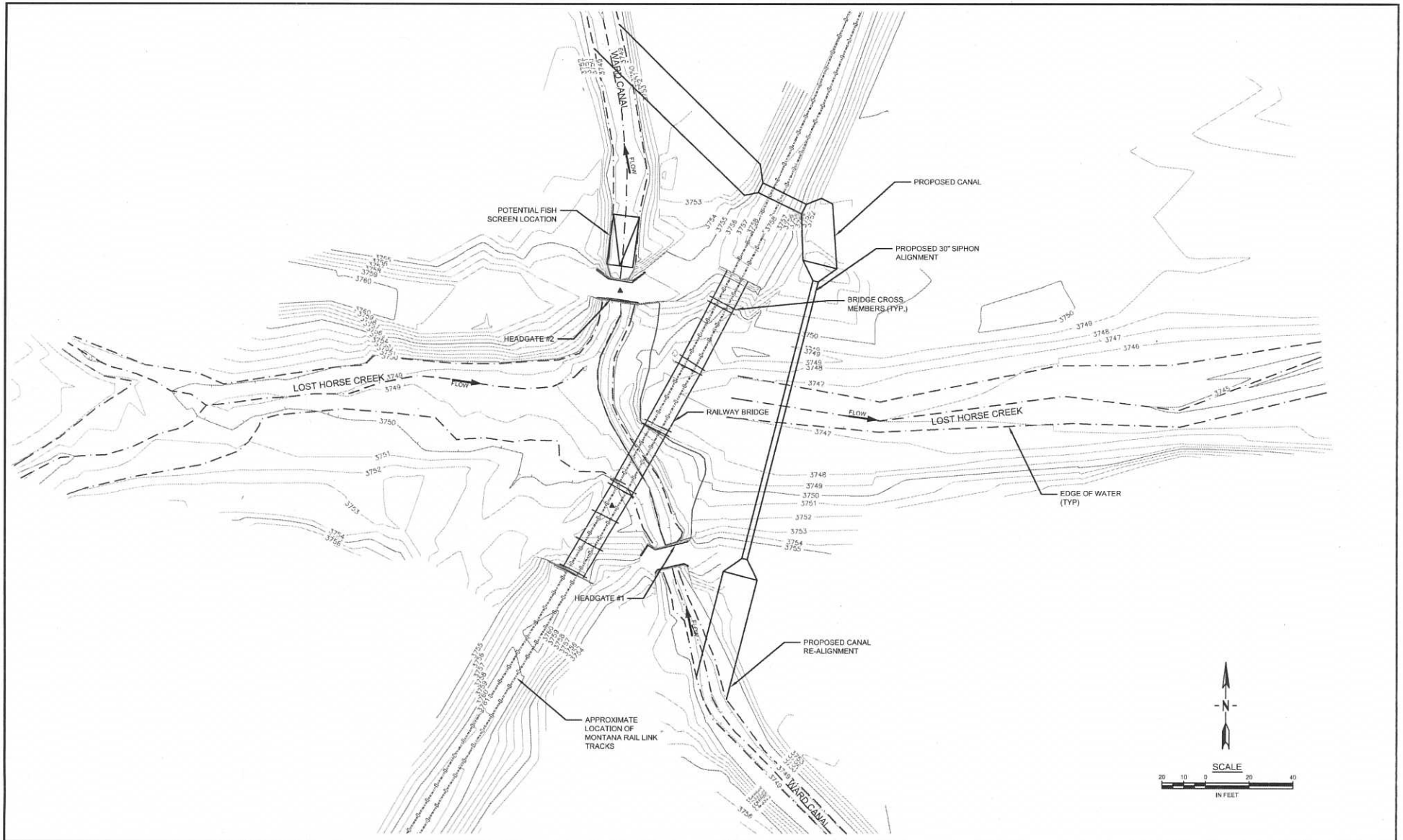
I serve as the Chairman of the Ward Irrigation District Commissioners. I am one of the major landowners in the District and fully understand the value and need to assure there is always, to-the-best- of my ability, irrigation water to these Charlos Heights community landowners who own land within the Ward Irrigation District.

I totally support the Siphon Project which is being proposed in the enclosed grant application process. It is essential to provide long-term certainties to irrigation water for this community. It will be very rewarding in that it will improve fisheries; assure reliability of irrigation water for the entire summer; greatly reduce environmental impacts by eliminating the annual diking, maintaining and removal of dike from Lost Horse Creek; assure consistent availability of water by allowing the District to take water from the Bitterroot River earlier and not waiting for Lost Horse Creek to drop enough to place the dike across the channel; and assure economic benefits to my ranch by providing access to the Bitterroot River water for the late season irrigation. This project could be the means of support for this and other ranches' livelihood.

If I can be of further assistance by providing input or answering questions you may have, please feel free to contact me. We commissioners, and in my opinion all the water users, are dedicated to this Ward Canal Siphon Project and greatly appreciate all financial support you can provide.

Sincerely,

Daniel Dunagan,
WID Chairman, Commissioner
329-4721



VERIFY SCALE!
THESE PRINTS MAY BE REDUCED. LINE BELOW MEASURES ONE INCH ON ORIGINAL DRAWING.
MODIFY SCALE ACCORDINGLY!

REVISIONS			
NO.	DESCRIPTION	DATE	BY

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MORRISON MAIERLE, INC.
An Employee-Owned Company
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Surveyors
Scientists
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DSGN. BY: MB
APPR. BY:
DATE:
Q.C. REVIEW BY:
DATE:

CITY

WARD CANAL PER

MONTANA

EXHIBIT

PROJECT NUMBER 4761.001
SHEET NUMBER #####
DRAWING NUMBER

Attachment H:

Flow Monitoring Plan

Flow Monitoring Plan:

The instream flow benefit is anticipated to accrue for the useful life of the siphon project (50-100 years). The Clark Fork Coalition proposes to monitor instream flows for the first 10 years of the project to set up the necessary flow monitoring triggers and protocols. At this point, the granting agency could choose to have either Ward Irrigation District monitor flow or another third party. In order to effectively monitor instream flow, the Coalition will need to purchase and install staff gages above and below the Ward diversion and purchase an automated flow gage ($700). The automated flow gage will also record stream temperature. The Clark Fork Coalition will use our Marsh McBirney flow meter to manually measure streamflows at least 4 times per year for the purpose of developing an annual rating curve for the staff and automated flow gages. The Coalition will work closely with the ditch rider for the District to ensure the necessary flows are provided to the creek. During the fall of each year, the Coalition will download, process the automated flow data (develop rating curves/graphs) and summarize it in a short report (which is will be made available to FWP). We expect that 10 years of active flow monitoring will be enough time to set up the necessary monitoring and flow management protocols to ensure the water quality benefits are being realized and measured correctly. After 10 years, it would be the responsibility of the District and or other interested agencies to oversee management of the instream flow.